Claims:

1. A reactive dye compound comprising:

(a) at least one chromophore moiety;

(b) at least one SO2C2H4 group which is attached to the chromophore moiety either directly via the sulphur atom of the SO2C2H4 group or via a linking group L;

characterised in that at least one SO2C2H4 group is substituted on its terminal carbon atom with at least one Y group wherein Y is derived from a hydrated aldehyde, a hydrated ketone, a hydrated alpha-hydroxy ketone or the hydrated form of formic acid, and linked via one of its oxygen atoms to the terminal carbon of the $SO_2C_2H_4$ group thereby forming a hemiacetal.

2. A reactive dye compound according to Claim 1 wherein Y is derived from a hydrated aldehyde or ketone or the hydrated form of formic acid.

Sub A1

3. A reactive dye compound according to Claim 1 or 2 wherein Y is derived from the hydrated form of a reducing sugar selected from an aldose or a ketose, or the hydrated form of formic acid.

4. A reactive dye compound according to Claim 3 wherein said aldose is selected from an aldotriose, an aldotetrose, an aldopentose, an aldohexose, an aldoheptose and an aldooctose, and mixtures thereof.

5. A reactive dye compound according to Claim 4 wherein said aldose is an aldopentose selected from ribose, xylose, arabinose, deoxyribose and fructose, and mixtures thereof.

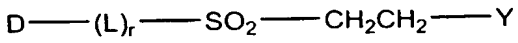
6. A reactive dye compound according to Claim 5 wherein said aldose is an aldohexose selected from glucose, galactose, talose, mannose, altrose, allose and rhamnose, and mixtures thereof.

7. A reactive dye compound according to any of Claims 1 to 6 wherein Y is derived from glucose, sucrose or fructose or the hydrated form of formic acid.

8. A reactive dye compound according to Claim 3 wherein said ketose is selected from an aldotetrulose, an aldopentulose, an aldohexulose, an aldoheptulose, and an aldooctulose, and mixtures thereof.

9. A reactive dye compound according to any of Claims 1 to 8 wherein Y is -O-(CHOH)4(CHOHCH2OH).

10. A reactive dye compound having the formula (I):

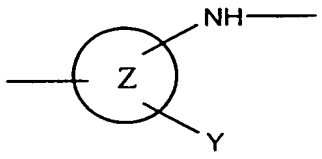


wherein: D is a chromophore group;

r is 0 or 1

L is a linking group selected from:

NH, $(CH_2)_n$, N-$(CH_2)_n$N, -$(CH_2)_n$-N, NR (R is C1-C4 alkyl)



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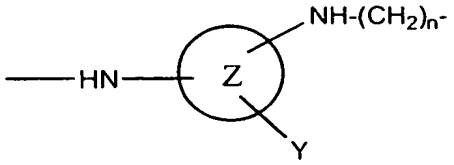

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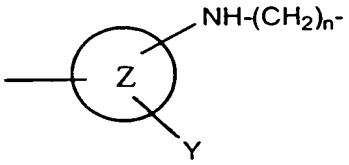

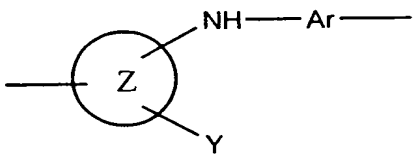

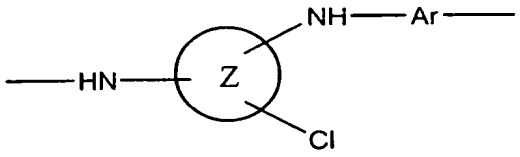

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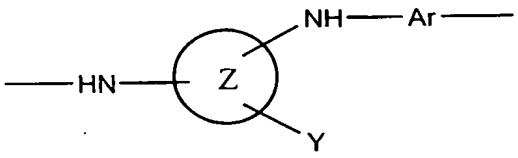

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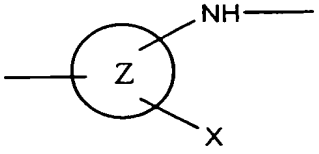

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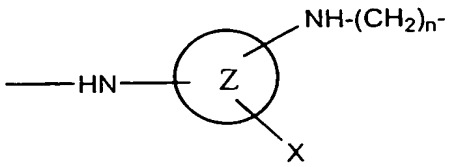

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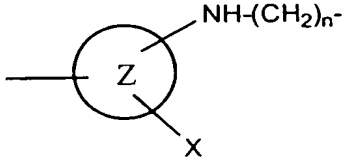

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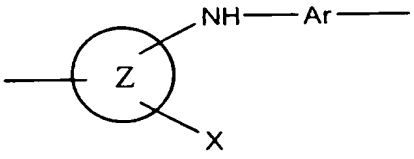

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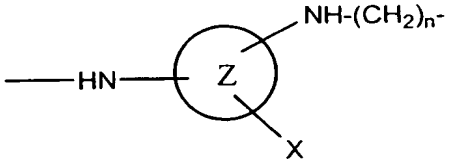

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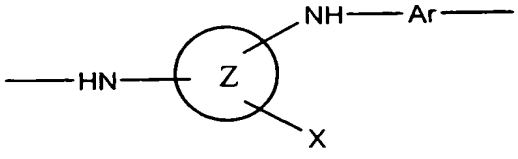


wherein Ar is an aryl group, preferably benzene, Y is as defined above, X is selected from thio-derivatives, halogen (preferably fluorine and chlorine), amines, alkoxy groups, carboxylic acid groups, CN, N_3, quaternized nitrogen derivatives, Q+, and oxy- or thio- carbonyl

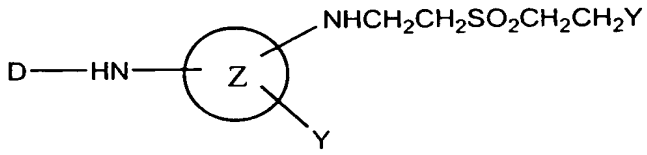
derivatives having the formula -A(CO)R* wherein A is selected from O or S, where R* is an organic residue which contains at least one nucleophilic group, wherein the nucleophilic group is preferably selected from OH, NH_2, SH, COOH, -N=, NHR^1 and NR^1R^2 wherein R^1 and R^2 may be the same of different and may be selected from C_1-C_4 alkyl; Z is a nitrogen-containing heterocycle, n is an integer of from 1 to 4;

and salts thereof.

11. A reactive dye compound according to Claim 10 wherein Z is selected from triazine, pyrimidine, quinoxaline, pyrimidinone, phthalazine, pyridazone and pyrazine.

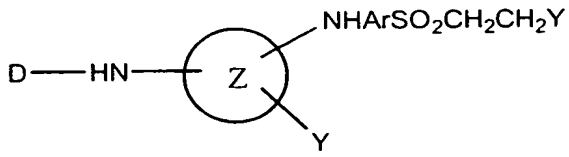
12. A reactive dye compound according to Claim 10 or 11 wherein r is 0.

13. A reactive dye compound having the structure:



wherein D, Z, and Y are as defined above.

14. A reactive dye compound having the structure:



wherein D, Y and Ar are as defined above.

15. Use of a compound according to any of Claims 1 to 14 for dyeing cellulosic substrates, preferably cotton.

16. Use of a compound according to any of Claims 1 to 14 for dyeing wool.

17. Use of a compound according to any of Claims 1 to 14 for dyeing polyamide substrates, preferably nylon.

18. Use of a compound according to any of Claims 1 to 14 for dyeing silk.

19. Use of a compound according to any of Claims 1 to 14 for dyeing keratin, preferably hair.

20. Use of a compound according to any of Claims 1 to 14 for dyeing leather.

21. Process for the preparation of a compound according to any of Claims 1 to 14 comprising the steps of reacting a first starting material with a second starting material, the first starting material comprising at least one chromophore and at least one $SO_2C_2H_4$ group which is attached to the chromophore group either directly via the sulphur atom of the $SO_2C_2H_4$ group or via a linking group, the second starting material being a compound containing a suitable Y group, preferably the hydrated form of a reducing sugar.

22. Process according to Claim 21 wherein the reducing sugar is selected from sucrose, glucose and mixtures thereof.

23. Process according to Claim 21 or 22 wherein the process is carried out at a pH of from about 2 to about 8.

24. Process according to any of Claims 21 to 23 wherein the second starting material is added to the first starting material slowly, preferably dropwise, preferably over several hours, preferably 1 to 5 hours, more preferably 1 to 3 hours.

25. Product obtainable by the process according to any of Claims 21 to 24.

26. A dye composition comprising the compound of any of Claims 1 to 14 or the product of any of Claims 21 to 25.

27. A dye composition according to Claim 26 wherein the composition is in the form of a solid mixture and further comprises an acidic or neutral buffer.

28. A dye composition according to Claim 26 wherein the composition is in the form of a liquid and further comprises water and an acidic or neutral buffer.

29. A dye composition according to Claim 26 wherein the composition is in the form of a paste and further comprises water, thickening agent and an acidic or neutral buffer.

30. A dye composition according to any of Claims 26, 28 or 29 wherein the pH of the composition is in the range of from about 2 to about 5, preferably from about 2 to about 3 when an acidic buffer is present, and in the range of from about 4 to about 8, preferably from about 6 to about 8 when a neutral buffer is present.